Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

superstition, it is I that should be refuted by it and proved superstitious—and purpose is identified with presumable destiny or movement in any assignable direction; identifications which are also very modern and American in spirit. All this is, in a sense, as it should be. Other insights have had and will have their innings; and it would be unreasonable to demand spiritual concentration or great flights of thought from those whose cue is to deny thought and spirit, or to explain them away. But how deny or explain away actual thinking? Simply by identifying thought with its immediate objects, and then looking for these objects in the texture of the material world. Hence a double inquiry forces itself upon this school, an inquiry for which it is well equipped and for which the moment is propitious; namely, to analyze more sharply than any one has yet done both the immediate objects of experience and the texture of matter. Given a scrupulous inventory of each of these spheres (including the logical, non-substantive penumbra of relations surrounding them, and of things that may be truly said of them) it would be easy to confront the two and see if one is really a portion of the other. Meantime, whatever the result might be on that issue, science would have gained a closer view into some dark corners of nature.

G. SANTAYANA.

THE EXTERNALITY OF RELATIONS[1]

THOSE realists who hold the doctrine of the externality of relations have seemed to be more interested in drawing out the consequences of their principle than in discussing or proving it. It is not an altogether grateful task to examine the problem critically, because it has been formulated in such a context that what one has to say is apt to seem abstract formalism to one party to the debate, or an elaborate *petitio* to the other. Some division of the question seems to be the first thing needed, and this paper is intended as a modest attempt to further it.

What, then, in the first place, is meant by "externality of relations"? In the "Platform of Six Realists" the principle is affirmed by all but one of the six, but it is fully defined only by Mr. Marvin and Mr. Spaulding, while the principle on which all five agree is really the possibility of one entity entering unchanged into more than one relational context. Besides this, there is certainly a difference of emphasis, if nothing more, between the formulation of Mr. Marvin and that of Mr. Spaulding. But as these gentlemen always appeal to Mr. Russell when this question is under discussion, I suppose it is fair to take his statement of the doctrine as canonical; and according to this, it consists of two propositions: "(1) Relatedness does not imply any corresponding complexity in the *relata;* (2) any given entity is a constituent of many different complexes."[2]

---

[1] Read before the Western Philosophical Association at Chicago, April 9, 1914.

Three proofs seem to be offered for this doctrine by its advocates; and I think that these proofs help one to understand the conclusion, though the possibility of this is denied in their logic. These proofs are (1) that from asymmetrical relations; (2) that from the nature of analysis; and (3) that from the relations of simple terms.

An asymmetrical relation is defined by Mr. Russell as one in which one term is so related to another that the second does not in its turn bear a similar relation to the first; xRy, but not yRx. Typical cases of such a relation are that of a whole to its part, or of a greater quantity to a less. Mr. Russell argues that such relations are unintelligible on both the monadistic and the monistic theories of relation, that is, on the theory which grounds the relation in the nature of the related terms and, therefore, he holds, reduces every relation to two propositions; and on the theory which grounds the relation in the system to which its terms belong and ultimately, therefore, in the nature of the universe or of the absolute. He also holds, and argues elaborately to show, that such asymmetrical relations are involved in number, quantity, order, space, time, and motion. And from this he draws the conclusion that "we can hardly hope for a satisfactory philosophy of mathematics so long as we adhere to the view that no relation can be 'purely external.'"[3]

This is obviously a topic which the inexpert in modern mathematics will very properly be cautious in approaching. Over this gateway to the new realism, as of old over that to the Academy, there is a warning inscription; and in this case it seems to read: "Let no one who is not versed in Cantor, Dedekind, and Frege, enter here." Perhaps this is why this particular proof of the externality of relations has usually been accepted or rejected as proffered, without discussion of its specific grounds. But it is open to the layman to notice that a strong party among the mathematicians have opposed Mr. Russell's conclusions. This mathematical opposition has at last made its appearance in the philosophical debate in the interesting article of Mr. Schweitzer.[4] In the course of this article Mr. Schweitzer maintains two theses which, if allowed, dispose of this proof. They are: (1) that asymmetrical relations are no more ultimate in mathematics than symmetrical; (2) that asymmetrical mathematical relations are explicable on an internal basis. I speak as a fool; but Mr. Schweitzer seems to make a good case, and I am

[2] "The Basis of Realism," this JOURNAL, Vol. VIII., page 158.

[3] "The Principles of Mathematics," page 226.

[4] This JOURNAL, Vol. XI., page 169.

glad to avail myself of his intervention as a dispensation from this phase of the argument.

But the general theory of relations which underlies this discussion is in any case a philosophical topic; and it is to this that I confine my remarks under this head. Mr. Russell asserts that the only alternative to the external theory of relations is a choice between monadism and monism, between Leibnitz and Mr. Bradley. One or neither! I would suggest that the proper answer is, both—and possibly something which is not included in either theory taken by itself. No terms confront us which are self-sufficient in such a way that they contain within themselves all their relational destiny; nor, on the other hand, do they merge in a bare identity or wholeness which leaves no room for their specific differences. Reality is an intelligible system of distinguishable entities. When we distinguish these entities, we recognize that they have specific natures of their own; when we say that they are related in this way or that, we recognize that their natures are such as to allow them to take a certain position in this or that systematic connection. However inseparable the specific natures and the system may be ontologically, they remain separate aspects of reality for our thought. Apply this to Mr. Russell's chosen example of the assymetric relation—*A* is greater than *B*. *A* and *B* each have specific magnitudes; thus the relation in question is grounded in *A* and *B*; but not in *A* and *B* apart from the quantitative system to which they belong. In that system these magnitudes have a determinate order; and this is what we mean when we say that *A* is greater than *B*, or that *B* is less than *A*. And if it is urged that this merely postpones the difficulty, which arises anew in regard to the relation of the magnitudes, I would reply that the objection is merely verbal. We do not usually make explicit mention of the systematic background in our judgment, but the judgment in this case really means that *A* and *B* have each their own place in the quantitative system.

The second argument for the externality of relations is based on the knowledge relation. It is said that if this relation is internal to the thing known, knowledge becomes impossible. A usual way of stating it is this: "If knowledge modifies its object, the object can never be known." Or again, it is said that as all thinking implies the validity of the analytic method, the validity of analysis can not be denied without self-contradiction. The first statement is gravely ambiguous. If it means that all who reject the doctrine of external relations hold that the act of knowing makes or alters the things known, it must be denied; only subjective idealists would say this, and many of them would make serious reservations in doing so. This meaning of the statement is, however, the only one on which the difficulty it asserts presents itself. The only sense in which we can all accept the statement, "Knowledge modifies its objects," is that of the truism, "All known objects are knowable," or that of the postulate, "All reality is intelligible." *"Omne ens et unum et verum et bonum,"* say the Scholastics. Nothing new in the postulate, certainly; and how trivial the truism! Nevertheless, either accepted, this particular argument for the externality of relations, in the sense in which the doctrine is defined by Mr. Russell, breaks down. For either truism or postulate implies a complexity in the thing known corresponding to the knowledge of it. It is one thing to be so-and-so, and another to be knowable as so-and-so. In fact, I think that if the realists are to maintain the second of Mr. Russell's principles—"Any given entity is a constituent of many different complexes"—in regard to the knowing complex, then they must give up the first. "Relatedness does not imply any corresponding complexity in the *relata.*" It is the same knowable *A* which is, let us say, an as yet undiscovered disturbance of the ether, and which is afterwards known; this by the second principle. But if so, it is as complex as it is later found to be, and at least is knowable; thus the knowing relation is grounded in it, and the first principle is contradicted.

Mr. Spaulding's "Defense of Analysis" offers another form of this argument. He asserts that the internal relations theory implies, in one of its aspects, that "the parts or elements are all constituted by their relations to all other parts in the same complex." Therefore, "in strict consistency with the constitutive theory, it is impossible to find or pick out, or identify, any entity as a genuine term; but the theory is stated, argued, and known—supposedly as an objective theory—and terms and propositions are identified as just those terms or propositions; and principles of proof are accepted." It follows, he concludes, that the theory refutes itself, since it must use the theory of external relations for both its statement and its defense.[5]

The reply to this is that the dilemma does not hold; external relations are not the only alternative to exhaustively constitutive relations. Relations sometimes constitute terms of discourse, or entities of definition; they never constitute existences.

But the conception of analysis itself is one of the chief difficulties here. Mr. Spaulding says: "The adequacy and validity of analysis can be demonstrated if both the terms and the organizing relations, to whose discovery analysis also leads, are considered."[6] Exactly! But the trouble is, that on the theory of external relations, the relations must be, for analysis, terms of the complex. Mr. Russell recognizes this. "Propositions," he says, "are not completely specified when their parts are all known. . . . The fact seems to be that a relation is one thing when it relates, and another when it is merely enumerated as a term in a collection."[7]

---

[5] "The New Realism," pages 165, 167.

[6] *Ibid.*, page 168.

Go a step farther. Propositions bear relations to one another, of contradiction, implication, and so on; they are in their turn terms of a higher order. But it would be obviously absurd to say that these relations "imply no corresponding complexity in their *relata,*" that they are not grounded in their terms. Take these propositions as known; then the continuity of their nexus is the manifestation to us of the transitive and dynamic character of reality in its most inclusive sense, and of the individual's knowledge as well. It would seem that to this we might all agree; for all of us—realists, idealists, and pragmatists—agree that reality is known in propositions. It is in our conceptions of how this happens that we differ. The neo-realist usually holds that propositions, and other entities, whether existent or subsistent, enter a special type of complex, the knowledge-complex, without undergoing any other change in doing so. The idealist often holds—as for that matter Aristotle seems to have held—that it is just in being known that reality fully is, that it receives its final finish, its *actus.* The pragmatist holds that knowing is a process of doubt-discovery, in which an existent is modified into a (subsistent) proposition. Now I submit that it is at least arguable that each of these three positions, however great their differences otherwise, is consistent with the statement, "reality is known as it is through propositions." But if so, then it follows from what has just been said that they are all three, and that of the realist not least, inconsistent with the external theory of relations.

The third argument for externality I quote from Mr. Russell: "A term *A* may have a relation to a term *B* without there being any constituent of *A* corresponding to this relation. If this were false, simple terms could have no relations, and therefore could not enter into complexes; hence every term would have to be strictly indefinitely complex."[8]

The first reply to this which occurs to one takes us back to Plato. It is, of course, that there must be a constituent of *A* corresponding to the relation (or of *B,* as the case may be), or else a relation of the relation to *A* (or *B*) will be necessary, and so on *ad infinitum.*

A formal rebuttal of this sort proves nothing, of course; but it does make us aware that we need to examine the presuppositions of the argument. These presuppositions are, I think, those on which the theory of external relations really rests, when it is strictly defined and kept clear of extraneous questions. The presuppositions seem to be two: (1) There are absolutely simple terms; (2) The only alternative to ultimate simplicity is infinite complexity.

---

[7] "The Principles of Mathematics," page 140.

[8] This JOURNAL, Vol. VIII., page 159.

In the case of concrete existing entities, the first proposition must be denied. There is none of them, perceived or conceived, which does not contain distinguishable aspects or internal differences; each and every one of them is, if I may use the phrase for once, a unity in difference. As to subsistents, they are either defined or indefinable; if defined, they are obviously not simple; if indefinables, then they are constituted by their relations as stated in the fundamental axioms of the sciences in which they appear. This very pertinent objection to externalism was clearly stated, in the case of the indefinables of mathematics, some three years ago, by Mr. De Laguna; and, so far as I know, none of the adherents of the theory has replied to it.[9] Its truth is implied in all that Mr. Russell says about points, to mention only one example.

The simples of Mr. Russell, so far as he names them, seem to be always subsistents, and usually indefinables; or else sense-primitives, if I may call them so, such as colors. Now in the case of any color-sensation, for example, we always find the distinguishable aspects of color-tone, saturation, and brightness; and this is the only color-term which can be in question for the purposes of this discussion, since it is the only one which enters into relations which can be described as external in any sense—the hue as mere hue has no independent existence of its own.

The second presupposition is that if simple terms can have no relations, all terms must be infinitely complex. This is another instance of neglect of the systematic background. Relations do not require to be entirely grounded in the term; sometimes the complexity involved is almost wholly in the system in which the terms occur. Music is a striking example of this; some of you may remember the famous passage of Cardinal Newman on that topic. Its opening words exactly illustrate the point I am trying to make: "There are seven notes in the scale; make them fourteen; yet what a slender outfit for so vast an enterprise! What science brings so much out of so little! Out of what poor elements does some great master in it create his new world!"

The method of discussion which I have followed in this paper may seem to some too formal and abstract. I can only plead, in the words of Mr. Russell, that it is often the case in philosophy that applications are more interesting than fundamentals. The analysis has been purposely made rather formal, and ontological terms have been employed instead of epistemological, so far as possible, partly to avoid any appearance of begging the question, and partly because I think the realists are justified in demanding that it be discussed from this side. Their theory in this respect, however, has often been better than their practise. It seems to me that the real issue has been much befogged by bringing in partly extraneous matter, such as the question of independence in knowledge; to ask, for example, whether dependence is a relation, or, on the contrary, whether all relations are dependences, is to start an endless debate, which is quite useless until the prior question of the externality of relations in general is settled —and then becomes, I think, superfluous.

---

[9] See his article, "The Externality of Relations," *Philos. Review,* Vol. XX., pages 612 ff.

Moreover, if my criticism of the three proofs is correct, it is not merely negative, but leads to this positive result,—that the first principle in Mr. Russell's statement of the doctrine, with which I began, must be denied, while the second is valid, at least in many cases, for I notice that none of the objections to the proofs applies to it. I therefore conclude that while every related term has a complexity in it which corresponds to, and in part accounts for, its relation, it is formally possible that the same term may be a member of an indefinite number of complexes. And this I would propose as the valid formal theory of relations, as far as it goes.

Additional confirmation of this result is to be gained from the application of the methodological test, recently suggested by Mr. Tawney.[10] Since the development of science depends on the investigation and establishment of relations, to assume the absence of any corresponding complexity in *relata* would bring it up against dead walls on all sides. But on the other hand, to assert that no relative invariants are discoverable would be equally bad, since it would prevent all delimitation and definition of problems, and all formulation of general laws.

It would not be fair to conclude this brief discussion without an acknowledgment of the justification and value of the recent realistic critique of "internality of relations." Some idealists have been overprompt to use the doctrine as an immediate solvent of metaphysical problems, a sort of royal road from logic into theology. Their arguments have seemed to imply that if one caught hold of the universe at any point, so to speak, then, since everything implies everything else, one could assume the whole system as though it were already known; then a dash of subjectivism, a reference to the "relating activity of the mind," and the absolute consciousness was proved. The philosophy of the great idealists was not of this shallow and inconsistent sort; and if the realists have aroused a general and merited distrust of such "short and easy" methods in philosophizing, they deserve our gratitude for it. The subjective implications of "relation," "relating," and their kindred terms, are pitfalls for the unwary; perhaps it would be well to substitute a consideration of *order* or *system* for them.

---

[10] See his article, "Methodological Realism," *Philos. Review*, Vol. XXII., pages 284 ff.

I conclude with a question which seems to suggest that more than categorical analysis may be necessary in order to solve the problem of relations completely. Are there unilateral relations? Aristotle and the Scholastics held that there were; and the neo-realists' emphasis on asymmetrical relations is a return to their point of view. Formal analysis seems to support them; for it would seem that a corresponding complexity in one of the terms, together with that of the systematic background, would be sufficient to ground the relation. But modern natural science will have nothing to do with such relations; all its relations are bilateral. Perhaps this is an indication of the limitations of formal analysis as such, though it does not invalidate its proper claims.

EDMUND H. HOLLANDS.

UNIVERSITY OF KANSAS.

REVIEWS AND ABSTRACTS OF LITERATURE

Space and Personality. ARCHIBALD ALLAN. Edinburgh: Oliver and Boyd. 1913. Pp. xxv + 607.

Should Parmenides become reincarnate and review the metaphysical teachings of the past twenty-four centuries, it is probable that he would judge them in much the fashion of the author of this extensive work. For the sage of Elea, all things were demonstrably one, not in the sense of interrelatedness and collective organization, but in that secondary (and properly metaphorical) sense of common self-identical essence which is so dear to lovers of cosmic simplicity. In every object for him, the fundamental and original thing, both in itself and for experience, was its existence or being; its properties were secondary both logically and psychologically. Now, existence (being) is an identical factor in all things, admitting of no differences of degree or kind. An object either is or it is not. Hence the essence of all things is the same, and Xenophanes's prophetic dictum, "The All is One," is literally true. By a like argument this "One" is changeless, that is, eternal.

So likewise reasons our author, though he takes a step in advance, and identifies this "One" which is "All" with a familiar object of ordinary belief. "We must assert," he says (p. 71), "that we all have a genuine consciousness of Being, Reality, What-we-are, without the remotest need of either quality or quantity to authenticate it to us as Being. Our consciousness of What-we-are, Reality, Absolute Being is never less than Is, Space-Being, within which all thought lives, moves, and has its being, and in which all its motions are finally subsumed." Our author thus